GEOGRAPHIC SCHOOL BULLETINS

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Two Georges Share Nicaragua's Sunny Christmas

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THE BULLETINS WILL NOT APPEAR DURING THE HOLIDAYS. NEXT ISSUE WILL BE JANUARY 3, 1955.

Top-level Conference in Santa Claus, Indiana—After the business of "What I Want for Christmas," comes the fun shown on pages 126-127.

RALPH GRAY, NATIONAL GEOGRAPHIC STAFF

"But didn't Columbus visit the country?" asked George.

"Oh, yes, on his fourth voyage in 1502. But he didn't come inland. He sailed along the Mosquito Coast."

"Was it named that because of the bugs?"

Jorge laughed. "No, because the Mískito Indians live there. But there are some mosquitoes, too," he admitted.

George's father had told him of this river-threaded jungle coast, Nicaragua's back door on the Caribbean. Producing mahogany, wild rubber, cacao, and once-important banana crops, this rain-drenched flatland supports a scattering of Indians, and Negroes speaking Jamaican English. "Spanish" Nicaragua faces the Pacific. In that western region of lakes and volcanoes live three out of four of the 1,166,000 Nicaraguans.

His flights over this largest yet most sparsely populated of Central American republics give George's father a good picture of its 57,143 square miles of tropical scenery. About the size of his home state Wisconsin, this triangular-shaped land has but one third the Badger State's population.

He sees mountains spill over the Honduran border to fill north-central Nicaragua, tapering southeasterly toward Costa Rica. A chain of volcanoes —several still active—rises from the narrow Pacific coastal plain. The mountain regions yield gold and timber. In valley soils enriched by volcanic deposits grow the country's staples: corn, beans, sugar cane, rice, tobacco, and the leading export crops, cotton and coffee.

Flying southeast from Managua, he sees 100-mile-long Lake Nicaragua glitter below. Its fresh-water depths contain a contradiction of nature: salt-water tarpon, swordfish, and man-eating sharks. The lake may once have been a bay of the Pacific.

A little steamer, the *Victoria*, built in Wilmington, Delaware, in 1882, still plies from lake port to lake port. At San Miguelito, in eastern-shore rangelands, cattle are made to swim out to shipside. A noose is dropped over their horns, and the bellowing animals are hoisted aboard.

The *Victoria* first steamed from Atlantic waters to Lake Nicaragua along the same route that Commodore Vanderbilt's river steamers earlier rushed California-bound "forty-niners"—up the alligator- and snake-infested San Juan River, along Costa Rica's border. This would form part of the often-proposed 173-mile Nicaraguan interoceanic canal.

George was surprised to learn that one of the U. S. Navy engineers who surveyed the route in the 1880's was Robert E. Peary of North Pole fame, then a young lieutenant. Later surveys also recommended Nicaragua, but in 1902 the U. S. Congress shifted its backing to the Panama project.

Christmas Eve arrives at last. But it hardly seems Christmas to George with Managua's tropical greenery, and his back smarting from yesterday's sunburn while swimming. Hearing fireworks, he remarks, "Sounds like Fourth of July."

"Fourth of July?" asks his Nicaraguan friend.

"Independence Day."

"Oh, *si*. You mean September fifteenth!"

References—Nicaragua appears on the National Geographic Society's map of Mexico and Central America. Write the Society, Washington 6, D. C., for a map price list. "Land of Lakes and Volcanoes," *National Geographic Magazine*, Aug., 1944; "An Army Engineer Explores Nicaragua," May, 1932. *School and library discount price for Magazines a year old or less, 50¢; through 1946, 65¢. Write for prices of earlier issues.*

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LUIS MARDEN, NATIONAL GEOGRAPHIC STAFF

Bananas for Granada, Lake Nicaragua Port—While banana exports have slipped in recent years, this golden fruit is always welcome on Nicaraguan dinner tables.

Two Georges Share Nicaragua's Sunny Christmas

"Soon comes *Noche Buena.* Almost I cannot wait," said Jorge (pronounced HOHR-heh) to his North American friend, George, as they left their school in Managua, capital of Nicaragua.

"*Noche Buena?* What's that?" asked George.

"That is when comes *El Niño Dios* (the Christ Child) to bring toys. Next day we have turkey and *nacatamales,*" said Jorge, smacking his lips.

George's father, assigned to the U. S. Air Force Mission to Nicaragua in late May, had immediately enrolled his 14-year-old son in a Nicaraguan school. "Aw, gee, no vacation," complained George, learning the school term was June to February.

George was fascinated by friendly, easygoing Managua, four-century-old city that rose anew from rubble of the March, 1931, earthquake. Here 100,000 Nicaraguans make their home fronting 40-mile-long Lake Managua.

"Why do you call your money *córdobas?*" George asked Jorge when buying sweets one day from a street vendor.

"The *córdoba* is named for Francisco Hernández de Córdoba. He founded Granada and León in 1524 and made friends with the Indian chief Nicarao. The name of my country comes from Nicarao."

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Report from Mars: Life Exists

Mars is alive!

No wild-eyed flight of science-fiction fancy, this is a studied report of a serious astronomer who observed the red planet during its closest approach to Earth in 13 years.

When Dr. E. C. Slipher, one of the world's recognized authorities on the planets, returned from Bloemfontein, South Africa, with 20,000 new photographs of Earth's near neighbor, he said, "Mars *has* to be alive. If things did not grow there, changing with the seasons, dust from the red deserts of Mars would have settled long ago over its entire face. The planet would be all one color."

Ice Caps and Canals—Dr. Slipher's photographs, made with the 27-inch telescope of Bloemfontein's Lamont-Hussey Observatory (illustration above), show clearly the great blue-green markings that characterize Martian geography. Significant changes in these were found during the astronomer's recent six-month study sponsored by the National Geographic Society and Lowell Observatory of Flagstaff, Arizona. He took his "Mars Expedition" to Bloemfontein for the better view that the southern hemisphere afforded.

Polar caps gleam white, frost areas appear, clouds and dust storms swirl across the surface. At least two new "canals"—faint and hazy, but really there—were photographed for the first time. Exposures made through colored filters penetrated the Martian atmosphere.

Mars in 1954 came within 40,000,000 miles of Earth. Observatories all over the world, led by the International Mars Committee, joined a coordinated research effort. They took the planet's temperature, measured its waistline, and observed the strange "blue clearing" of its atmosphere when clouds usually seen through blue filters vanish mysteriously.

At Lowell Observatory as well as at Palomar in California, Mars was photographed for the first time by electronics. A televisionlike setup projected an image on a large screen, which in turn was recorded by conventional camera.

Oases and Seasons—The vegetation believed responsible for mysterious markings on Mars probably is similar to lichens that cling to rocks on Earth where nothing else can grow. The red planet has little oxygen and less water. There seems scant possibility that any animal life similar to Earth's could exist under Martian conditions.

The "oases" on Mars change color, grow, and shrink with the seasons. In areas of Martian spring, Dr. Slipher found markings broader and more intense in color than any he had seen in 50 years of observation. "This last year," he said, "must have been a very good and fertile year on Mars."

In 1956 Mars will give scientists the closest possible look when it will pass only 35,000,000 miles from Earth. By comparison the sun is nearly 93,000,000 miles away, the moon only about 240,000 miles.

References—"First Photographs of Planets and Moon with 200-inch Telescope," *National Geographic Magazine*, Jan., 1953; "Our Universe Unfolds New Wonders," Feb., 1952; "Mapping the Unknown Universe," Sept., 1950; "The Heavens Above," July, 1943; "News of the Universe," July, 1939; GEOGRAPHIC SCHOOL BULLETINS, April 26, 1954, "Astronomers Visit Africa to Study Mars."

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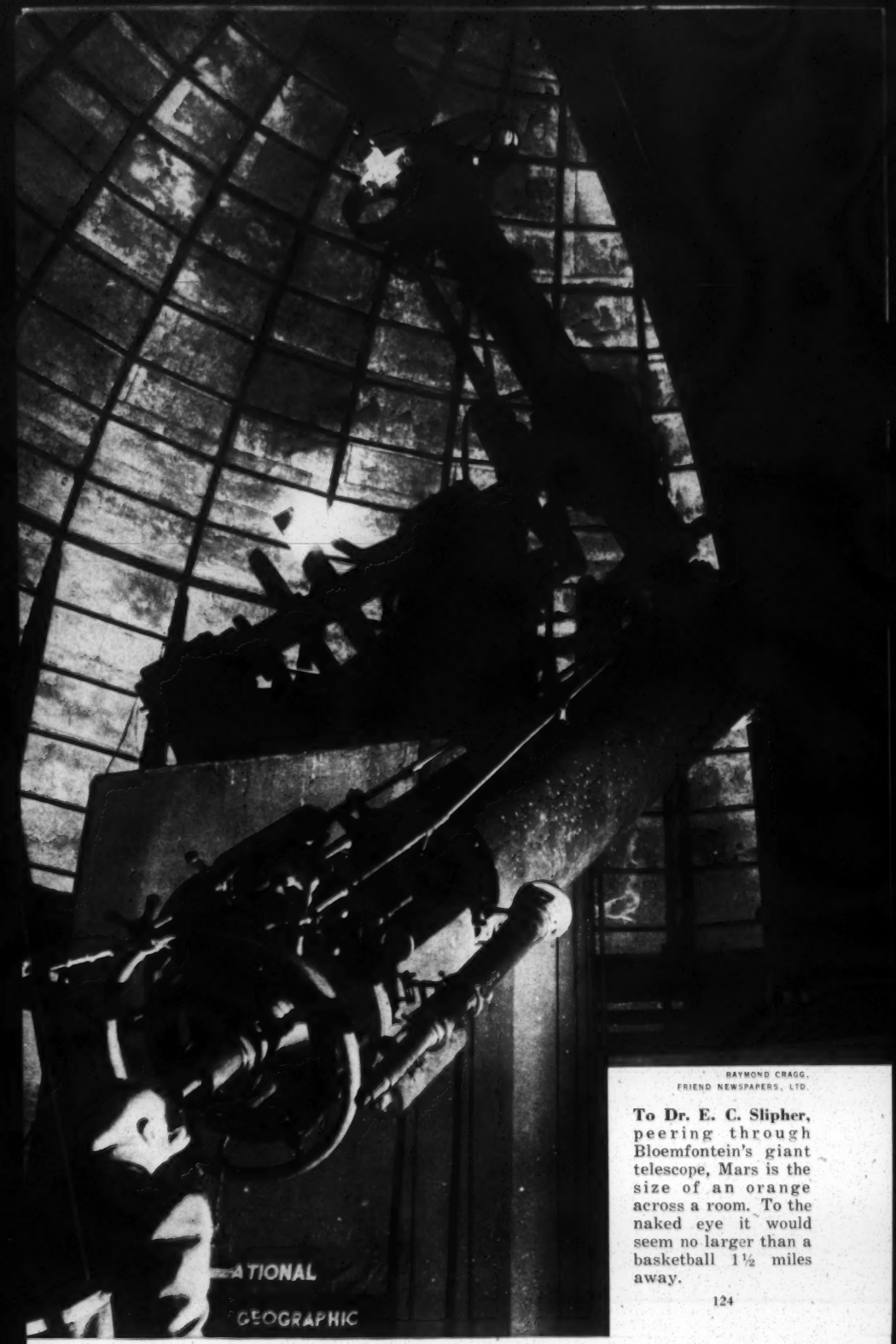

RAYMOND CRAGG,
FRIEND NEWSPAPERS, LTD.

To Dr. E. C. Slipher, peering through Bloemfontein's giant telescope, Mars is the size of an orange across a room. To the naked eye it would seem no larger than a basketball 1½ miles away.

in England advised Santa not to come down the chimney because it was stopped up and sooty.

Santa Claus, Indiana, the nation's one and only post office bearing Saint Nick's name, came by this honor 98 years ago, four years after a Christmas meeting at the local church selected the name for the pioneer Hoosier community.

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Yes, There *Is* a Santa Claus

Children and grownups step into a world of fun and wonder in real-life Santa Claus, a village set among the hills of southern Indiana.

Humpty Dumpty greets them as they walk down a storybook path where they meet many other friends from Mother Goose tales.

In the exhibit hall children pause for a reverent Yuletide moment before a churchlike setting. A doll in crimson robe and ermine collar plays the organ beneath stained-glass angels.

A holiday-dressed girl is enthralled with the House of Dolls, where fuzzy kittens and a parasoled lady introduce her to an elegant and diminutive Marie Antoinette. She moves on to meet others among the thousand dolls from all over the world, costumed in authentic manner.

Another young miss, in buckskin garb, goes to a three-ring circus. The gilded circus wagon and the mechanical clowns, aerialists, stunt riders, and trained animals bring before her eyes all the riotous color and action of the big top.

While starry-eyed youngsters frolic, the postmaster and his assistants busily sort and stamp letters and packages with the coveted cancellation mark: "Santa Claus, Indiana."

Many letters children address to Santa come through this little post office to Jim Yellig (the Santa on the cover) who cheerfully sees that every child gets a personal reply from Saint Nick himself. One letter from a girl in England advised Santa not to come down the chimney because it was

KILOPHOT

From Venice Marco Polo Fared Forth Seven Centuries Ago on His Fabulous Journey

a beautiful maiden being sent as wife to the Khan of Persia!

But now in Genoese prison came his opportunity. Fellow prisoner Rusticiano, a scholar from Pisa, wrote down his story on parchment—*The Book of Ser Marco Polo Concerning the Kingdoms and Marvels of the East.* A truce between Venice and Genoa freed the Venetian merchant.

But Marco's trials did not end. Scribes copying his book felt the need to add that while it told many highly interesting things they could not vouch for its truthfulness. On his deathbed, friends urged Marco to retract his astounding statements. But tradition relates his last defiant words: "I have not told half of what I saw."

Soon after his death, clowns appeared in Venetian carnivals, aping the "wild fancies" of "Marco Millions." Map makers, ignoring his gold mine of geographical information, continued to distort the world. "It's a Marco Polo" became the catch phrase to describe any exaggeration.

Today, 700 years after Marco Polo's birth, the world acknowledges its debt to the Venetian adventurer. Only within the last century have many remote spots he described so vividly again been viewed by Western eyes. Modern explorers have proved him right.

References—Regions Marco Polo visited may be located on the Society's maps of Asia and Adjacent Areas, and Southwest Asia. "The World's Greatest Overland Explorer," *National Geographic Magazine*, Nov., 1928 (out of print; refer to your library).

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No Scoffers Now at Marco Polo's Tale

Four blank walls of a Genoese dungeon pressed in upon Marco Polo. He yearned for freedom, for his native Venice, to travel once more. His recent defeat and capture still rankled.

His mind summoned up the proud picture of the Venetian fleet moving into battle off the Dalmatian coast, colors flying, banks of oars churning blue waters to the beat of kettledrums and shrilling of fifes. But fortune turned against the Adriatic republic. Genoa, bitter trade rival, triumphed. Gay banners dragged in the water as defeated galleys were scornfully towed to port backward. Marco Polo, "gentleman commander" of the war galley he had financed, was cast into prison.

Three years before, in 1295, he had returned from the East. His eyes beheld kingdom after kingdom across Asia's breadth. He traversed Persia's deserts, Pamir's blue-cold plateau, Badakhshan's wild gorges, Khotan's jade-bearing rivers, the dread Gobi. For years he had served the Mongol Emperor Kublai Khan, whose realm reached from Poland to the Yellow Sea, from Siberian steppes to India.

Marco had visited Tibet, Burma, Siam, Ceylon, India, a hundred places virtually unknown to the West. His had been the most fantastic journey yet made. Yet worldly-wise Venice derided his tales. "Marco Millions," they jeered, laughing at the great distances he reported, the teeming peoples, the million-man Mongol armies, Cathay's Grand Canal, and other marvels.

The dogs of Venice had barked at travel-worn Marco upon his return with his father Nicolo and uncle Maffeo. The Polos found 24 years had changed beautiful, marbled Venice almost as much as themselves. A distant relative refused them entrance to Marco's own home. For were not Marco, Nicolo, and Maffeo long since dead?

A feast was arranged to prove their identity. The three Polos appeared in robes of crimson satin. In accordance with Mongol custom, they cut these into strips, distributing the cloth to the servants while they donned other robes of crimson damask. They soon cut these into souvenirs for the guests and put on still richer robes of crimson velvet.

The feast over, the trio emerged in the coarse attire they had worn on arrival. Ripping the seams with sharp knives, they let rubies, sapphires, emeralds, pearls, diamonds, jade, a fortune in priceless gems pour onto the table, "causing much wonder and amazement among the guests."

True, these must be the Polos, known for their merchant skill. But who could believe their tales? "Imagine!" scoffers said, "sheep with tails that weigh 30 pounds! And paper used for money in Cathay. And black stones burned as fuel, and nuts large as a man's head, and snakes 30 feet long!"

Marco's wealth and commercial success excused his "eccentricity" of telling about the dazzling Mongol court, its far-flung postal service, about Asia's unknown birds, animals, plants, the strange customs, the gold-plated teeth, dehydrated milk, and fire alarms. And how incredible that Kublai Khan should send young Marco on confidential missions throughout his empire, appoint him governor of Yangchow at 23. And allow him to return home after years of service only when Marco offered to escort by sea

Fertile grain fields of eastern Washington, virgin forests of northern Idaho, and finger valleys of western Montana share a common history. Civilization grew slowly because of arid land, lack of developed water power, and almost insurmountable transportation difficulties. Yet today, hardy pioneers with government help are taming the territory, an area larger than all New England, New York, and New Jersey.

Fruit farming has turned the land around Yakima, Washington, into an oasis of cherry, peach, and apricot orchards. Across the Palouse hills and in the Big Bend, acre upon acre of golden wheat disappear into the horizon. No halfhearted farming this, but large-scale commercial agriculture, as big as the vegetables the rich area also produces. Southern Idaho's potatoes, however, grow outside the Inland Empire.

Eastern Montana's ranches likewise lie beyond the empire's limits. But natural lush-grass valleys high in the lonely reaches of Idaho graze countless sheep and cattle. Down the Snake River to Lewiston, Idaho, tumble thousands of logs to feed a thriving timber industry. Upstream lies the nation's largest wilderness area.

Butte, Montana, mining and livestock center of the Inland Empire, has a restless history of mining claims and labor disputes. Beneath the city lies one of the richest mineral deposits in the world. It has produced between two and three billion dollars in mineral wealth since 1864, mostly copper and gold. Under the surface of mile-high Butte Hill, corridors and tunnels total more than 2,800 miles. Near-by Anaconda smelts Butte's copper and zinc.

A present-day miner, "coming down the hill," leaves his digging clothes in a locker near the shaft. He showers, shaves, and appears on the street dressed like a businessman. He may stop for a game of cards with cattlemen, cowpokes, and ranchhands, silver dollars jangling in their pockets.

Fabulous deposits of gold and silver in Idaho's Coeur d'Alene region

"Richest Hill on Earth" Rises above Butte, Montana—Mining company buildings descend the barren hillside, punctuated by ore dumps and gallow frames marking mine shafts. Each year 253 more miles of tunnels honeycomb the depths.

NATIONAL GEOGRAPHIC PHOTOGRAPHER WILLARD R. CULVER

RAY ATKESON

Oregon's Umatilla Valley, Unaided by Irrigation, Yields Bumper Crops of Wheat

Northwest Pioneers Build Inland Empire

A young veteran and his wife proudly survey their new farm near Moses Lake, Washington, watching irrigation water trickle through their 80 acres of beans and alfalfa. They remember when nothing but sagebrush and jack rabbits grew in this section of the "Inland Empire."

But the government completed Grand Coulee Dam in 1942 and 10 years later opened irrigated lands fed by its 151-mile-long reservoir. To this new frontier flocked 20th-century homesteaders. Moses Lake, a dusty hamlet, grew overnight to 5,000 and became a hub for a million-acre reclamation project, the nation's largest.

Grand Coulee harnesses turbulent waters of the Columbia River, bringing not only irrigation but electric power and flood control. Constructed at a cost of $142,954,000, it is the greatest structure ever built by man. Its spillway—half as wide and twice as high as Niagara Falls—is flanked by two giant powerhouses. One of its 12 pumps can lift a billion gallons of water every 24 hours—more than enough to supply the city of Chicago. Its reservoir, Lake Roosevelt, holds enough water to overspread all New England three inches deep.

By generating cheap power for the Hanford Atomic Energy Plant, Grand Coulee played a large part in winning World War II. Wartime also brought the aluminum industry to the area. Bauxite shipped from other parts of the United States is refined in Mead, Washington, by the Kaiser Aluminum and Chemical Corporation.

Spokane, Washington, 90 miles from Grand Coulee, has increased 33 percent in population in 10 years. Hub of the Inland Empire, it lies at a point on the Spokane River where 100 years ago Indians speared salmon. Through the heart of the city the river winds under many bridges and over cascading falls.

Spokane is the pulsating center of a vast sweep of land enclosed by the Rocky Mountains to the east, the Cascades to the west. This Inland Empire, which includes parts of Washington, Idaho, Montana, and Oregon, is such a homogeneous unit that it almost became a state in 1886. President Cleveland vetoed the bill to name it Lincoln.

U. S. DEPARTMENT OF INTERIOR

Washington's Grand Coulee Dam, World's Largest, Towers High as a 46-Story Skyscraper

and mineral wealth in Washington's Metaline Gulches still pour money into United States coffers. An Indian girl, Jane Silicott, showed Idaho's treasure chest to a prospecting expedition in 1860. Spurred by discoveries, "panhandlers" from as far away as China rushed to the Inland Empire. They took gold from the Clearwater country and jasper, agates, opals, and sapphires from the mountains and 10,000-foot peaks. Transportation was difficult, however, and competition stiff. Briefly flourishing hamlets sank into the past, leaving false-front stores and hollowly echoing main streets.

Today's Inland Empire-builders let off steam each year at the Pendleton Round-Up. Cowboys handle bucking broncos while Indians in their finest regalia enact tribal war dances. Feet are light as couples whirl to the western fiddler and his square-dance tunes.

The past overtakes the present where settlers in lonely reaches still fight the cougar and the bear not far from modern towns springing up about Grand Coulee.

References—For States of the "Inland Empire" see the Society's map of the Northwestern United States. "Following the Trail of Lewis and Clark," *National Geographic Magazine*, June, 1953; "From Sagebrush to Roses on the Columbia," Nov., 1952; "Idaho Loggers Battle a River," July, 1951; "Montana, Shining Mountain Treasureland," June, 1950; "Oregon Finds New Riches," Dec., 1946; and other articles listed under State names in *National Geographic Magazine Cumulative Index*.

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